

Abstract of the Disclosure

The present invention relates to a vaccination comprising co-administration of an antigen and a viral vector providing immunity at both humoral and antibody levels.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/110482 A1

(51) International Patent Classification⁷: **A61K 39/12**, 39/04, 39/39, A61P 31/00

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number: PCT/GB2004/002499

(22) International Filing Date: 14 June 2004 (14.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0313737.9 13 June 2003 (13.06.2003) GB
0400438.8 9 January 2004 (09.01.2004) GB

(71) Applicant (for all designated States except US): **ISIS INNOVATION LIMITED [GB/GB]**; Ewert House, Ewert Place, Summertown, Oxford, Oxfordshire OX2 7SG (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HILL, Adrian** [IE/GB]; 20 St. Andrews Road, Oxford OX3 9DL (GB). **MOORE, Anne, C.** [IE/GB]; 107 Greenridges, Headington, Oxford OX3 8LX (GB). **NICOLL, Claire, L.** [GB/GB]; 3/120 Marlborough Road, Grandpont, Oxford OX1 4LS (GB).

(74) Agent: **LORD, Hilton, David**; Marks & Clerk, 57-60 Lincoln's Inn Fields, London WC2A 3LS (GB).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMPROVED VACCINES

(57) Abstract: Vaccination comprising co-administration of an antigen and a viral vector provides immunity at both humoral and antibody levels.

WO 2004/110482 A1